# Europe's national energy efficiency champion

## The European energy efficiency scoreboard for 2021

*An eceee & ODYSSEE-MURE joint project*

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# What is the eceee & ODYSSEE-MURE energy efficiency scoreboard?

- A benchmarking tool to compare the impacts of energy efficiency policies and developments amongst European countries. It is intended to paint a well-rounded picture of how a country is performing with respect to energy efficiency, relative to its peers in Europe.
- The first energy efficiency scoreboard to account for quantitative impacts of policies (output-based scoring). It accounts for several decades of statistical data as well as future impacts of current energy efficiency programmes.

# Why this Scoreboard?

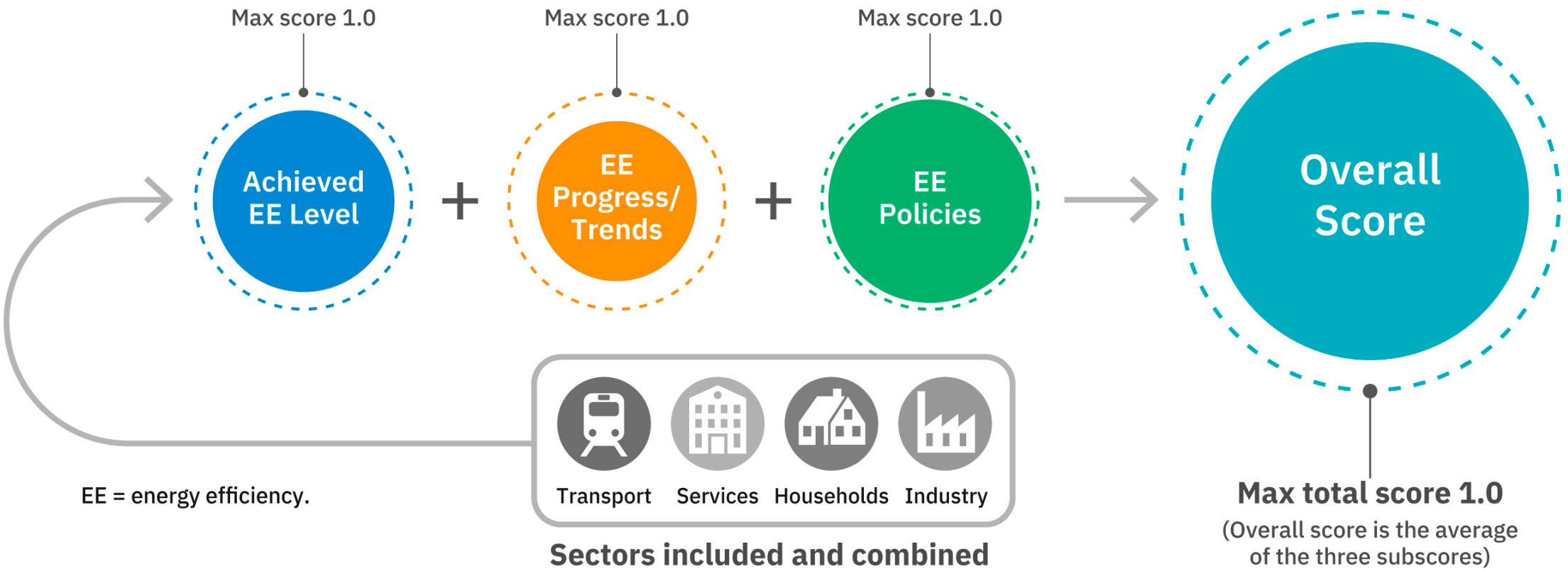
- **Raise the profile** of energy efficiency
- **Increase transparency** about progress and impacts of energy efficiency policy
- **Facilitate learning** – highlight successes and areas for improvement.

*The unique aspects of this scoreboard are:*

- It uses **indicators** that are adjusted for structural and climatic factors
- It accounts for **quantitative effects** of policies
- It considers impacts from the **past**, the **present**, and even **future** implications
- It weighs **various evidence-based parameters** into **one single score**

By weighing various parameters, and by looking back and to the future, the score gives a more fair and realistic description of development than simple comparisons of energy intensity.

# How does the ODYSSEE-MURE scoring method work?



# How does the ODYSSEE-MURE scoring method work?

The **overall score** is an average of the achieved EE (energy efficiency) *level*, EE *progress/trends* made since 2010 (changed from 2000 to 2010 for the 2021 Scoreboard), and the EE *policies* in place.

It includes the following sectors:
**industry, transport, households,** and **services**.

***Scores are based on data from:***

- the *ODYSSEE database* on energy efficiency **indicators**
- the *MURE database* on energy efficiency **policies**.

# The score "Level" – assessing today's performance level

**The Level Score** answers the question "How is my country **currently** performing with respect to energy efficiency?"

**Quantitative measure** of a country's performance at the present time, influenced by autonomous developments, energy prices and policies in place. Accounts for all major sectors of the economy (Industry, Transport, Households, and Services).

The scoring is based on **adjusted** and mainly **physical indicators** for energy efficiency (and not on simple energy intensities), such as:

- energy use per $m^2$ and building type (household, office…)
- share of public transportation in total land passenger transport
- specific energy consumption for industrial branches


Note: The "Level" parameter is based on the top-down statistical energy efficiency indicators in the ODYSSEE database

# Which country scores best on “Level”?

Switzerland

Denmark

Spain

Ireland

Lithuania

# Lithuania has the highest score 2021 on “Level”

*Level – overall (all sectors) ranking top 5*

| Rank | Country | Score |
|---|---|---|
| 1 | Lithuania | 1.0 |
| 2 | Switzerland | 0.96 |
| 3 | Spain | 0.85 |
| 4 | Denmark | 0.83 |
| 5 | Ireland | 0.81 |

# The score "Trend" – a look at progress since 2010

**The "Trend"** score answers the question
*"How much **progress** has the country achieved in the area of energy efficiency?"*

The Trend score determines progress using the same set of energy efficiency indicators as selected for the "Level" score since the year 2010.

Dynamic parameter that takes development and past actions into account.


**Note: The "Trend" parameter is based on the top-down statistical energy efficiency indicators in the ODYSSEE database**

# Which country scores best on “Trend”?

Croatia

Greece

Switzerland

Romania

Luxembourg

# Greece has the highest score 2021 on “Trend”

*Trend – overall (all sectors) ranking top 5*

| Rank | Country | Score |
|---|---|---|
| 1 | Greece | 1.0 |
| 2 | Luxembourg | 0.96 |
| 3 | Romania | 0.92 |
| 4 | Switzerland | 0.88 |
| 5 | Croatia | 0.81 |

***Note: baseline year changed from 2000 to 2010 in 2021 UPDATE**

# The "Policy" score – quantifying future savings from today's policies

**The Policy Score** answers the question
*"What **future impacts** can I expect from **recent policies** enacted in my country?"*

This score forecasts the energy-saving impacts of more recent policies from a given starting year, e.g., 2015, until a target year (e.g., until 2030). It converts policy impacts into a quantitative or semi-quantitative score.

Bottom-up evaluation of policies, based on the energy savings expected to be achieved in each sector compared to the sectoral energy consumption.


**Note: Policy impacts are gathered in the MURE Database from quantitative and semi-quantitative measure impact evaluations in a target year, e.g., 2030. Also, the reference year for policies has changed from 2000 to 2010**

# Which country scores best on “Policy”?

Germany

France

Romania

Estonia

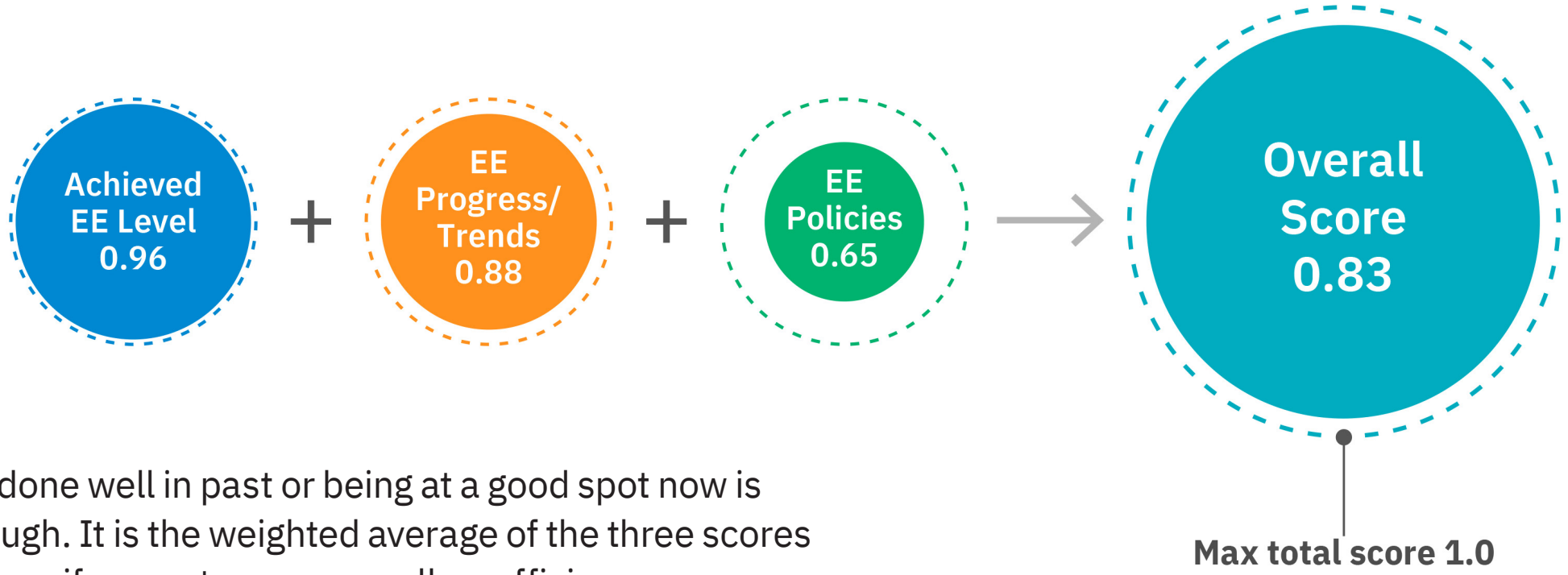
Ireland

# Estonia get the best score 2021 on “Policy”

*Policy – overall (all sectors) ranking top 5*

| Rank | Country | Score |
|---|---|---|
| 1 | Estonia | 1.0 |
| 2 | France | 0.872 |
| 3 | Ireland | 0.81 |
| 4 | Germany | 0.6841 |
| 5 | Romania | 0.6804 |

# The best Overall Score combines all sectors and the three score categories




Having done well in past or being at a good spot now is not enough. It is the weighted average of the three scores that shows if a country scores well on efficiency.

# Europe's top country 2021?

France

Switzerland

Romania

Ireland

Estonia

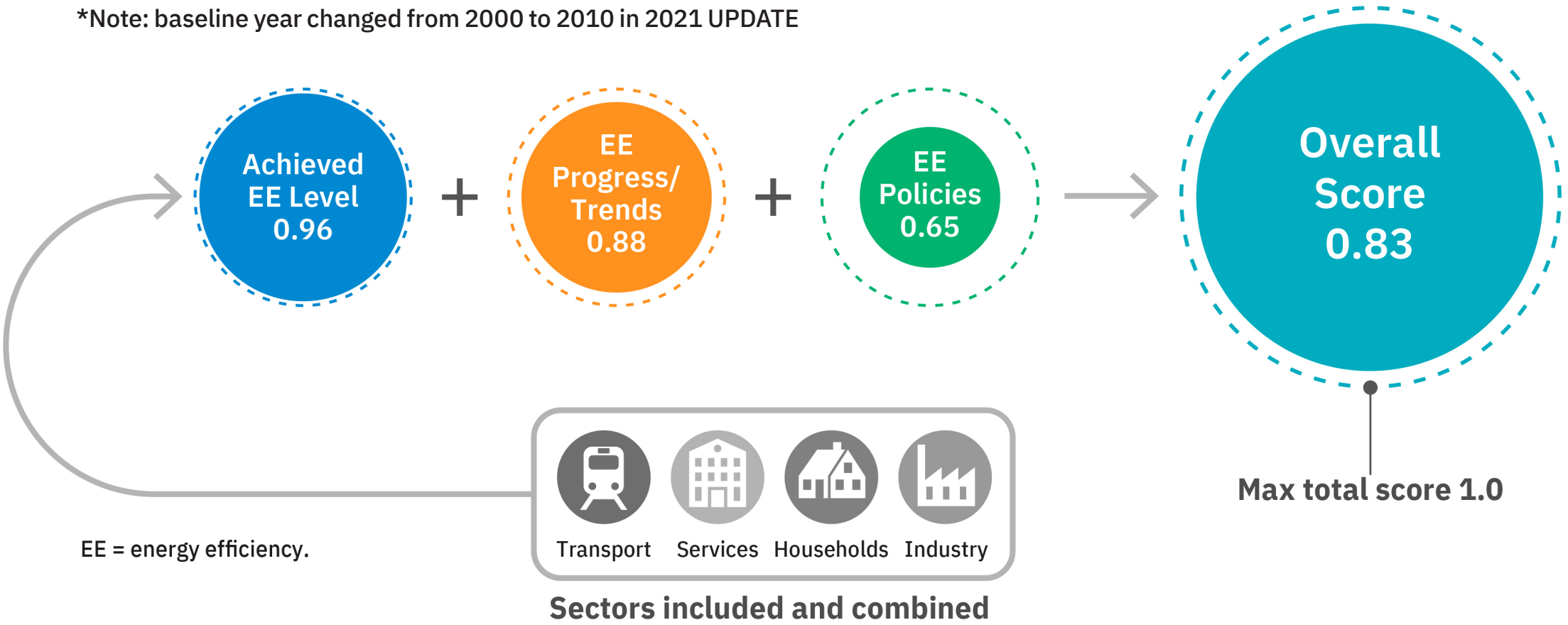
# Switzerland is Europe's 2021 energy efficiency champion

*Best top Overall Score – ranking top 5*

| Rank | Country | Score |
|---|---|---|
| 1 | Switzerland | 0.83 |
| 2 | Ireland | 0.77 |
| 3 | Estonia | 0.736 |
| 4 | Romania | 0.713 |
| 5 | France | 0.67 |

# Switzerland's score composition

*Note: baseline year changed from 2000 to 2010 in 2021 UPDATE




EE = energy efficiency.

# Switzerland – detailed scoring – 2021 UPDATE

*Aggregate score of many sectors and three scoring categories*

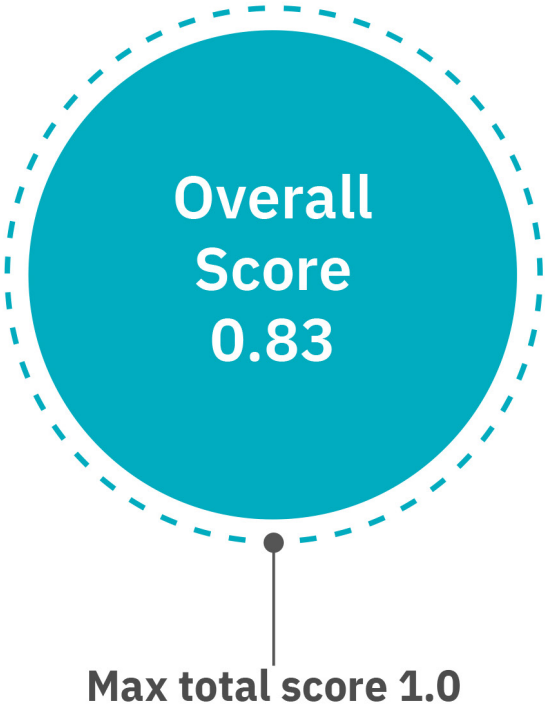
| | Level | Trend | Policy | Combined |
|---|---|---|---|---|
| **Overall** | **0.96** | **0.88** | **0.65** | **0.83** |
| Industry | 1 | 0.36 | 0.32 | 0.56 |
| Transport | 0.61 | 0.72 | 0.28 | 0.53 |
| Households | 0.94 | 0.85 | 0.84 | 0.88 |
| Services | 0.91 | 0.60 | 0.95 | 0.82 |

# Why did Switzerland score so well – and what can be improved?

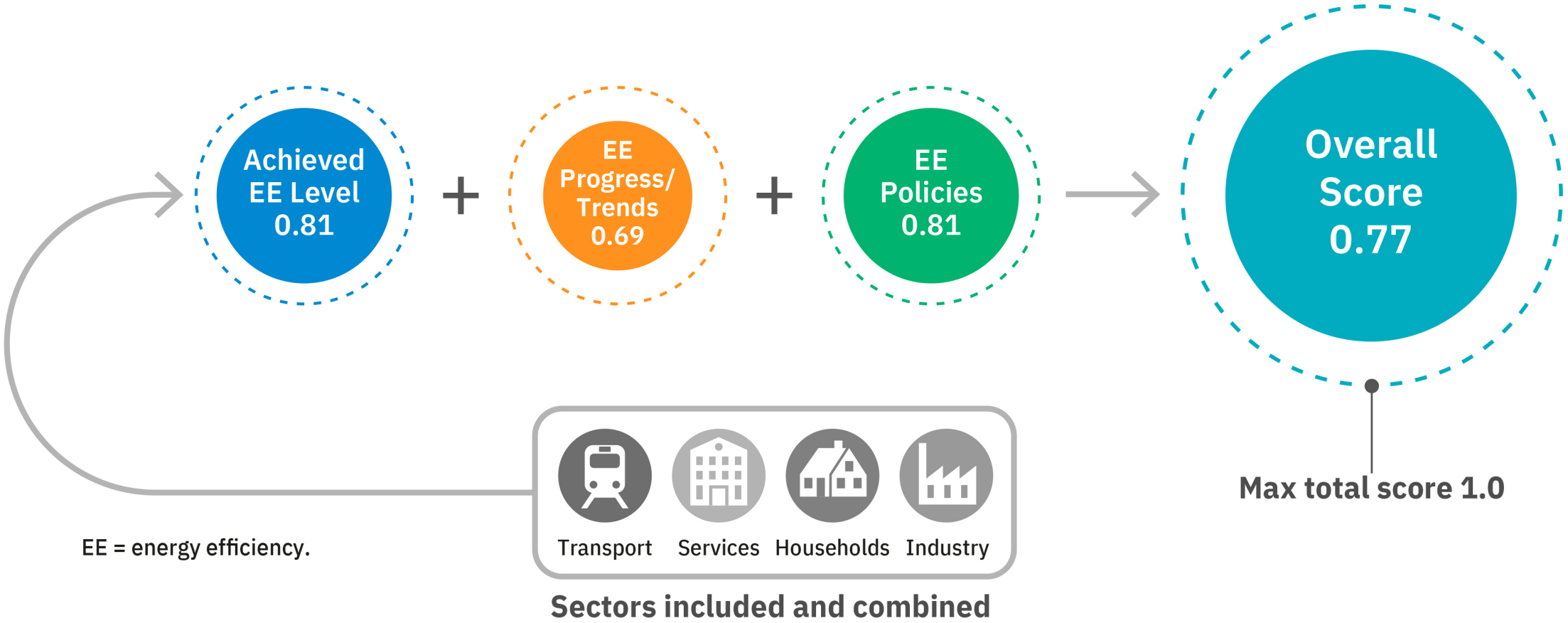
- **Top 5** in Level and Trends, 6th place in Policies
- Top score for **Industry-Level**
- Very strong **Policy scores** overall – especially Industry, Households, and Services. Some ground lost compared to 2020

*Room for improvement?*

- Relatively weak **Trend** score in **Industry** and **Transport** (i.e. slow improvement over time)
- Currently medium to strong **Policies** in both of those sectors indicate that Trend should improve.



# EU's top scoring 2021 country is Ireland



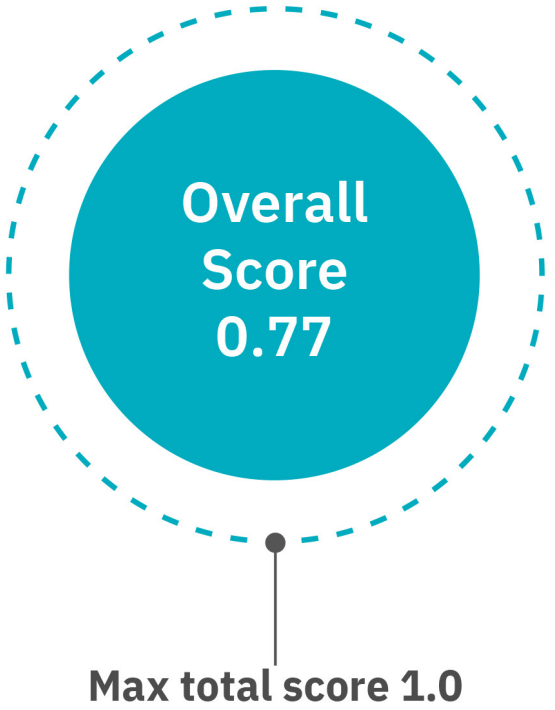
# Why did Ireland score so well – and what can be improved?

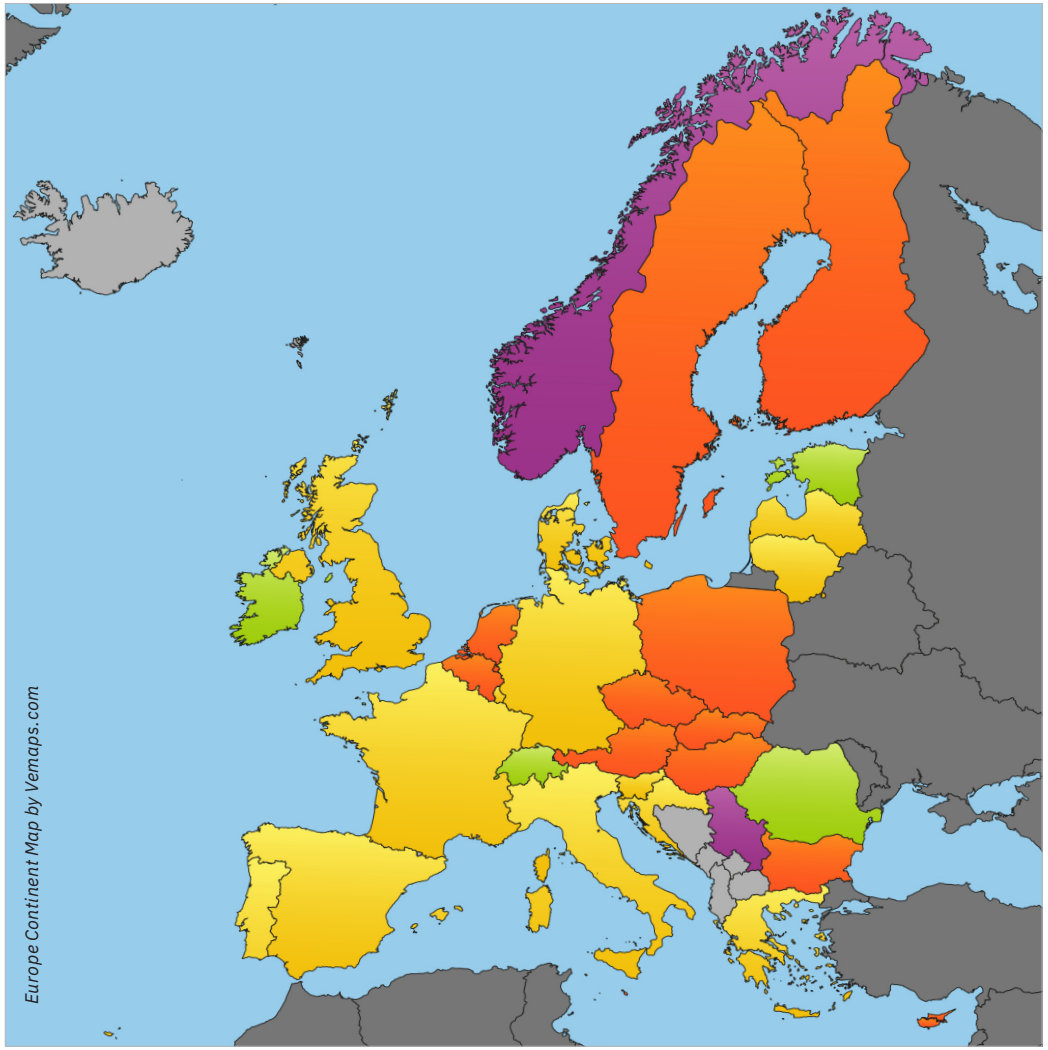
*Why did Ireland score well?*

- Ranks **3rd** in overall **Policy** activity due to several high impact measures in **Transport**, **Households** and **Services**
- **High efficiency level** in **Industry** (Rank 1) and **Households** (Rank 3)
- Ranks **7th** in **Trend** – particularly strong progress in **Households** and **Transport**

*Room for improvement?*

- **Ireland can improve** in the **Transport** sector (ranks 23rd on level) and **Service** sector (ranks 23rd on level and 24th on trends)






# The Scoreboard covers 31 countries: EU, Norway, the UK, Serbia and Switzerland

**Upper value**
Score above 0.70 [4 countries, 2021]

**Middle value**
Score in the range 0.41–0.69
[13 countries]

**Lower value**
Score below 0.40
[14 countries including Norway and Serbia with incomplete data]

# Do we account for comfort and standard of living?

*Do we fail to catch comfort level, such as differences in indoor temperature? Do we give poor countries too high rating?*

- The scoreboard doesn't take the level of energy services into account.
- However, the "Trend" score for each a country relies on 10 years of comparable data for the country.
- We can assume that the level of services has not changed drastically.

# What about weather fluctuation and differences in industry structure?

- The “Level” score uses average data for the last three years to account for changes in specific years.
- Differences among countries concerning climate and annual temperature variations are corrected for.
- Different industry structures are accounted for.

# What about sufficiency?

- A country with more sqm floor space per person is compared with countries with fewer square meters per person.
- The share of public transport is compared to the total passenger transportation in a given country.
- Additional indicators in future could be added, reflecting the impact of sufficiency policies on energy efficiency on the scoreboard.

This presentation and infographic on the energy efficiency scoreboard was developed by Borg & Co and eceee as part of the ODYSSEE-MURE project.

*Graphic design: Björkman & Mitchell*

**More information**

**https://www.odyssee-mure.eu/data-tools/scoring-efficiency-countries.html**

european council for an energy efficient economy

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